

REMARKS

Claims 1-32 are pending in the present application. Claims 1-32 were canceled and claims 33-62 were added. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 102, Anticipation

Claims 1-5, 11, 13-17, and 23-27 have been rejected under 35 U.S.C. § 102 as being anticipated by Gase (6,363,081). This rejection is respectfully traversed.

All claims have been rewritten to more clearly recite the invention. Representative claim 33, which replaces claim 1 now reads,

33. (New) A method of port sharing among a plurality of processes running on a server, the method comprising the steps of:
in a port-mapping program located on a server and configured between a shared port and a plurality of processes running on said server, receiving an incoming data packet having a header containing a first port number and a first address of a process;
comparing said first port number and said first address to entries in a port-sharing-table that contains, for each of said plurality of processes that share a port, a respective shared port number, a respective address, and a respective assigned port number; and
if said first port number and said first address are equal to a respective shared port number and a respective address for a given process, replacing said first port number in said header with a respective assigned port number for said given process.

It is asserted that this claim recites a number of distinctions over the art relied on. Gase states,

The first application to successfully bind to the port is deemed the "primary" application, and all remaining applications are deemed "secondary" applications. The secondary applications register themselves with the primary application by submitting their IP addresses and a port number of the port. The primary application adds the secondary applications to a distribution list. The primary application listens for incoming packets delivered over the port. When a packet is received, the primary application sends a copy of the packet to each secondary application on the distribution list. The primary and secondary applications are then free to consume the packets for their own purposes. As a result, multiple applications are able to receive the same data packets received over one port.

It is submitted that Gase does not show the use of a separate port-mapping program; it does not show comparing a port number and address from a header with entries in a table of application addresses and associated ports; and it does not show replacing the port number in the header with a new, assigned port number. Additionally, it is submitted that the use of a separate port-mapping program provides a distinct advantage over the prior art. Gase discloses that

When it is time for the primary application to shut down (i.e., the "yes" branch from step 104), the primary application notifies the secondary applications of the

impending shut down (step 106). The shutdown notice contains address and port information that matches the address and port included in the response to the ADD request (Table 2). The address helps the secondary application identify the appropriate primary application, in case the secondary application is registered with more than one primary application. Upon receiving a shutdown notice, the affected secondary applications begin negotiating among themselves to identify which application should become the primary application.

The use of a primary application that acts on behalf of both itself and a number of secondary applications requires that when the primary application finishes executing, the secondary applications must arbitrate among themselves to establish a new "primary" application. Because the inventive program is a separate application, it can remain in place even as applications that are using the shared ports come and go. Thus, there is no additional overhead associated with establishing a new primary application.

It is submitted that this rejection under 102 is overcome.

Furthermore, Gase does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. Gase looks at the alternate possibility of the primary and secondary applications being on different servers, but does not appear to realize that a permanent port-mapping program can provide the same port sharing as the setup of Gase. Absent the examiner pointing out some teaching or incentive to implement a permanent port-mapping program in Gase which actually replaces the port number with an assigned port number, one of ordinary skill in the art would not be led to modify Gase to reach the present invention when the reference is examined as a whole.

II. 35 U.S.C. § 103, Obviousness

Claims 6-10, 12, 18-22, and 28-32 have been rejected under 35 U.S.C. § 103 as being unpatentable over Sugihara (6,385,197). This rejection is respectfully traversed.

Representative claim 38, which replaces claim 6, states,

38. (New) A method of sharing a port among a plurality of processes on a server, the method comprising the steps of:
in a port-mapping program located on a server and configured between a shared port and a plurality of processes running on said server, receiving an outgoing data packet having a header containing a first port number and a first address of a process;
comparing said first port number and said first address to entries in a port-sharing-table that contains, for each of said plurality of processes that share a port, a respective shared port number, a respective address, and a respective assigned port number; and

if said first port number and said first address are equal to a respective assigned port number and a respective address for a given process, replacing said first port number in said header with a respective shared port number for said given process.

It is submitted that Sugihara is directed to a "mechanism for simplifying the maintenance of the ports of a network switch", rather than allowing applications to share a port within a server. It is noted that while Sugihara also utilizes a table associated with the use of ports, this table contains different elements than the present invention, as the figures below confirm.

510 **FIG. 5** 520

510	520
SHARED PORT/ADDRESS	MAPPED PORT/ADDRESS
www.gfxclabel.com.80	www.gfxclabel.com.81
www.herbsshoes.com.80	www.herbsshoes.com.82
www.bonribonbon.com.80	www.bonribonbon.com.83
www.jerryjackets.com.80	www.jerryjackets.com.84

500 →

Current application

Virtual Port	Trunking Group	Member Ports
27	1	3, 4, 7
28	2	13, 14
29	3	Not Used
30	4	Not Used

500

FIG. 5

Sugihara

The top table is taken from the present application and shows that shared port/address elements are placed opposite their mapped port/address elements. Multiple messages that come into the server (shown in the left-hand column) all show a single port number; however, within the server, different ports are associated with different domains served (right-hand column)

In contrast, the table of Sugihara shows how several ports that are part of a

trunking group are all given the same virtual port number. It is therefore submitted that Sugihara does not meet the limitations of the comparing step above, as it is not looking at either an address, as shown above.

Therefore, the rejection of the claims under 35 U.S.C. § 103 has been overcome.

III. Conclusion

It is respectfully urged that the subject application is patentable over Gase and Sugihara and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

Draft

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